



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,029	09/08/2004	Takeo Kitamura	2004_1303A	7688
52349	7590	12/10/2008		
WENDEROTH, LIND & PONACK LLP. 2033 K. STREET, NW SUITE 800 WASHINGTON, DC 20006			EXAMINER	
			STIMPERT, PHILIP EARL	
ART UNIT		PAPER NUMBER		
3746				
MAIL DATE		DELIVERY MODE		
12/10/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/507,029	Applicant(s) KITAMURA ET AL.
	Examiner Philip Stimpert	Art Unit 3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(o).

Status

- 1) Responsive to communication(s) filed on 14 August 2008.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 12 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 12 and 17 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 08 September 2007 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
- 1) Certified copies of the priority documents have been received.
 - 2) Certified copies of the priority documents have been received in Application No. _____.
 - 3) Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 12 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kayukawa et al. (US 6,179,578) in view of Hisanaga et al. (US 6,152,713).
 3. Regarding claim 12, Kayukawa et al. teach a compressor (see Fig. 1) comprising a compressing mechanism for compressing a fluid that contains lubricating oil (col. 2, ln. 38-39), a separation chamber (43), having an interior space that is to have revolved therein fluid compressed by the compressing mechanism such that at least part of the lubricating oil contained in the fluid is separated from the fluid by centrifugal force produced by revolution of the fluid in the interior space, an exhaust hole (51) at an upper end (left in Fig. 2) for exhausting the fluid from the interior space, and a feed hole (comprising the intersection of passage 18 and the interior surface of the separation chamber 41) for introducing the compressed fluid into the interior space in a direction downwardly away from the exhaust hole with respect to a vertical axis (horizontal in Fig. 2). Kayukawa does not teach an oil-storage chamber, a communication passage between such an oil-storage chamber and the interior space, nor a lubricating oil discharge hole at a lower end of the separation chamber. Hisanaga et al. teach an oil-storage chamber (130, see in particular Fig. 12) and a communication passage (123)

which opens in a tangential direction (see Fig. 14). Hisanaga et al. teach that their particular arrangement of these elements allows for a stable and constant supply of lubricating oil to the compressing mechanism (col. 16, ln. 52-56). Hisanaga et al. also teach a lubricating oil discharge hole (4c, see Fig. 8). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the oil separator of Kayukawa et al. to provide an oil-storage chamber and communication passage as taught by Hisanaga et al. in order to allow for a stable and constant supply of lubricating oil to the compressing mechanism of Kayukawa et al. One of ordinary skill in the art would further appreciate that fluid flowing from the communication passage into the interior space would not substantially disturb the revolution of the compressed fluid therein. It would further have been obvious to add a lubricating oil discharge hole as taught by Hisanaga et al. to the lower end of the separation chamber of Kayukawa et al. in order to provide redundant communication between the chambers in the case of overflow or clogging.

4. Regarding claim 17, Kayukawa et al. teach a compressor (see Fig. 1) comprising a compressing mechanism for compressing a fluid that contains lubricating oil (col. 2, ln. 38-39), a separation chamber (43), having an interior space that is to have revolved therein fluid compressed by the compressing mechanism such that at least part of the lubricating oil contained in the fluid is separated from the fluid by centrifugal force produced by revolution of the fluid in the interior space, an exhaust hole (51) at an upper end (left in Fig. 2) for exhausting the fluid from the interior space, and a feed hole (comprising the intersection of passage 18 and the interior surface of the separation

chamber 41) for introducing the compressed fluid into the interior space in a direction downwardly away from the exhaust hole with respect to a vertical axis (horizontal in Fig. 2). According to the combination, Hisanaga et al. teach an oil-storage chamber (130, see in particular Fig. 12) and a communication passage (123) which opens in a tangential direction (see Fig. 14). One of ordinary skill in the art would further appreciate that fluid flowing from the communication passage into the interior space would not substantially disturb the revolution of the compressed fluid therein. Further, any fluid introduced into the separation chamber would move in a parallel direction (effectively the same tangential direction in which the fluid is introduced by the feed hole).

Response to Arguments

5. Applicant's arguments filed 14 August 2008 have been fully considered but they are not persuasive.
6. Regarding the introduction of the lubricating oil discharge hole, the grounds of rejection has been modified to take into account the teachings of several of the disclosed separation chambers of Hisanaga et al.
7. Regarding the argument that Kayukawa's elements are not disposed in the vertical orientation specified, the examiner points out that the compressor of Kayukawa et al. could be rotated such that the specified orientation would be achieved. Further, this limitation is made with respect to the recited vertical axis of the separation chamber, and given the axis as described in the rejection, the chamber of Kayukawa et al. meets this limitation.

8. Regarding the tangential direction of claim 17, this limitation has been addressed above. The examiner understands the distinction that the applicant is attempting to make, but does not believe that the actual structure has been appropriately claimed. The applicant is invited to schedule an interview with the examiner for the purpose of arriving at mutually satisfactory language describing this limitation.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Stimpert whose telephone number is (571)270-1890. The examiner can normally be reached on Mon-Fri 7:30AM-4:00PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on (571) 272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/
Supervisory Patent Examiner, Art
Unit 3746

/P. S./
Examiner, Art Unit 3746
5 December 2008